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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,406	08/06/2003	Joel W. Schoenblum	A-9049	1436

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SCIENTIFIC-ATLANTA, INC.
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EXAMINER

RAO, ANAND SHASHIKANT

ART UNIT	PAPER NUMBER
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2621

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/03/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/03/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOmail@sciatl.com

Office Action Summary	Application No.	Applicant(s)	
	10/635,406	SCHOENBLUM, JOEL W.	
	Examiner	Art Unit	
	Andy S. Rao	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 1/12/07.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22-32 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 21 is/are rejected.
- 7) ☒ Claim(s) 5-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
2. Applicant's arguments with respect to claims 1-4, and 21 as filed on 1/12/07 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eifrig et al., (hereinafter referred to as "Eifrig") in view of Reininger et al., (hereinafter referred to as "Reininger").

Eifrig discloses an apparatus in a network for transcoding a digital stream of compressed frames, the apparatus comprising: a decoder adapted to decompress a frame having content information and non-content information included therein into the run-level domain (Eifrig: column 19, lines 15-25), wherein the content-information carried by the frame is represented in run-level domain (Eifrig: column 26, lines 10-13); a processor wherein the content-information of the frame is changed from initial content information to final content information (Eifrig:

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column 23, lines 45-65); and an encoder adapted to compress the frame (Eifrig: column 16, lines 45-60), as in claim 1. However, Eifrig fails to disclose that the processor is adapted to determine the number of bits to shave (Ns) from the frame and adapted to process the frame in the run-level domain to reduce the compressed bit size of the frame by approximately Ns bits, as in the claim. Reininger discloses a two pass quantization process including a processor adapted to determine the number of bits to shave (Ns) from the frame and adapted to process the frame to reduce the compressed bit size of the frame by approximately Ns bits (Reininger: column 6, lines 1-25: "bits cut" process) and determine whether to requantize at least a given portion of the frame based on a reduction threshold determined from the number of bits to shave from the given portion of the frame (Reininger: column 4, lines 1-27) and an initial content size for the given portion (Reininger: column 3, lines 5-25) in order to implement robust bit rate control without image quality degradation (Reininger: column 1, lines 55-62). Accordingly, given this teaching of the Reininger reference, it would have been obvious for one ordinary skill in the art to incorporate the Reininger bits cut process into the Eifrig transcoder in order to have the Eifrig transcoder implement robust bit rate control without incurring image quality degradation. The Eifrig apparatus, now incorporating Reininger's bit cutter, has all of the features of claim 1.

Regarding claim 2, the Eifrig apparatus, now incorporating Reininger's bit cutter, has wherein the processor is further adapted to: (a) determine whether to requantize at least a given portion of the frame (Eifrig: column 19, lines 30-35); (b) responsive to determining to requantize at least the given portion of the frame, requantize in the run-level domain at least the given portion of the frame (Eifrig: column 26, lines 10-15); (c) determine whether to threshold at least the given portion of the frame (Eifrig: column 16, lines 45-51); and (d) responsive to determining

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to threshold at least the given portion of the frame, threshold in the run-level domain at least the given portion of the frame (Eifrig: column 26, lines 10-13), as in claim 2.

Regarding claim 3, the Eifrig apparatus, now incorporating Reininger's bit cutter, discloses wherein the frame is made up of multiple blocks arranged in a sequence, and each block is represented by at least one set of run-level pairs, and the given portion of the frame is represented by at least one set of run-level pairs (Eifrig: column 24, lines 50-56), as in the claim.

Regarding claim 4, the Eifrig apparatus, now incorporating Reininger's bit cutter, and each set of run-level pairs representing a block of the slice is processed in parallel (Eifrig: column 20, lines 1-5), as in the claim.

Regarding claim 21, the Eifrig apparatus, now incorporating Reininger's bit cutter, has wherein to determine the number of bits to shave (N_s) from the frame the processor is further adapted to: determine total size (N_T) of the frame (Eifrig: column 28, lines 60-68), wherein the total size (N_T) is number of bits of the frame when the frame is compressed, and wherein number of bits to shave (N_s) is defined as the difference between the total size (N_T) and a desired size (N_D), $N_s = N_T - N_D$ (Reininger: column 5, lines 1-25), as in the claim.

Allowable Subject Matter

5. Claims 5-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
6. Claims 22-32 are allowed.

Independent claim 22 recites "...receiving in a first bit stream a compressed frame having compressed content information and non-content information therein, the compressed frame having a first bit size (NT1), and the compressed content information having a first bit size (CT1); determining an approximate number of bits to shave (Ns) from the compressed frame, decoding the compressed frame such that the frame is represented by initial content information formatted in sets of run-level pairs, wherein each set of run-level pairs is defined by a set of levels and an associated set of runs; associating a scan position with a level in a set of run-level pairs; decomposing the sets of run-level pairs into sets of levels and sets of runs..." which are features that are not anticipated nor obvious over the art of record. Dependent claims 23-32 are allowed for the reasons concerning the independent claims. Accordingly, if finally rejected claims 1-4, and 21 are canceled, the application would be placed a condition for allowance.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (571)-272-7337. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571)-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andy S. Rao
Primary Examiner
Art Unit 2621

asr
March 29, 2007

ANDY S. RAO
PRIMARY EXAMINER

